

REMARKS

In response to the Office Action mailed on May 3, 2006, Applicant respectfully requests reconsideration. Claims 1-12 were previously pending in this application. By this amendment, claims 3, 7 and 11 are amended. As a result, claims 1-12 are pending for examination with claims 1, 3, 6, 7, 9 and 11 being independent. No new matter has been added.

I. Specification

The Office Action objects to the title as not being descriptive. Applicant respectfully disagrees. The title "METHODS AND APPARATUS FOR EARLY LOOP BOTTOM DETECTION IN DIGITAL SIGNAL PROCESSORS" precisely and distinctly describes the invention. Applicant is open to amending the title to overcome the rejection if the Examiner has suggestions for amendment. However, Applicant is unsure of what the Examiner feels is not descriptive about the title as, in Applicant's opinion, the title is descriptive and indicative of the invention.

II. Allowable Subject Matter

Applicant appreciates the Examiner's indication that claims 3, 4, 7, 8, 11 and 12 contain allowable subject matter and would be allowable if rewritten in independent form incorporating all the subject matter of their respective base claim and any intervening claims and rewritten to overcome the rejection under 35 U.S.C. §101. The rejection under 35 U.S.C. §101 is addressed in Section III below.

Claim 3 has been rewritten in independent form, incorporating all of the subject matter of claim 1. As a result, claim 3 is believed to be in allowable condition as indicated in the Office Action. Claim 4 depends from claim 3 and is allowable for at least the same reasons.

Claim 7 has been rewritten in independent form, incorporating all of the subject matter of claim 6. As a result, claim 7 is believed to be in allowable condition as indicated in the Office Action. Claim 8 depends from claim 7 and is allowable for at least the same reasons.

Claim 11 has been rewritten in independent form, incorporating all of the subject matter of claim 9. As a result, claim 11 is believed to be in allowable condition as indicated in the Office Action. Claim 12 depends from claim 11 and is allowable for at least the same reasons.

III. Rejections Under 35 U.S.C. §101

The Office Action rejects claims 1-12 as purportedly being non-statutory subject matter under 35 U.S.C. §101 for not producing a tangible result. In particular, the Office Action asserts that “the final step is no more than a determination of whether or not the next instruction is a loop bottom instruction. There is no tangible result.” Applicant respectfully disagrees.

Initially, Applicant respectfully points out that the *determination* of whether or not the next instruction is a loop bottom instruction is itself manifestly a tangible result. The purpose of Section 101 is to define the limits of subject matter to which statutory patent protection should extend to avoid efforts to patent laws of nature and purely abstract mathematical formulas, it is not however, a test for patentability. The Examiner has correctly cited *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* as the correct source of the present test for statutory subject matter, namely, whether the invention produces a “useful, concrete and tangible result.” However, the Office Action erroneously applies the standard to the present claims.

It should be appreciated that the *State Street* holding is an inclusive standard, affirming that “business methods” and so-called “software patents” are deemed statutory subject matter if they pass the above recited test. However, the present claims are not even remotely of the type that merit scrutiny under 35 U.S.C. §101. Indeed, the present claims easily pass the even stricter “technological arts” test previously applied by the Patent Office which was overturned by the courts as an unlawful restriction of 35 U.S.C. §101.

The claims are directed to methods and apparatus for processing variable width instructions in a pipeline processor. This is fundamental §101 subject matter. Applicant asserts that not only does each claim as a whole produce a “useful, concrete and tangible result,” but that each limitation alone in each claim meets this standard. For example, the “decoding instructions to identify a loop setup instruction having a loop setup instruction and containing a loop bottom offset” limitation in

claim 1 by itself produces a useful, concrete and tangible result. Similarly, the “instruction decoder configured to decode a loop setup instruction” in claim 6 also by itself produces a useful, concrete and tangible result. That is, an apparatus or method for decoding instructions, whether patentable or not, naturally provides a useful, concrete and tangible result.

Applicant points out that each limitation, even if provided alone, is proper §101 subject matter to emphasize that the individual claims as a whole are thus unquestionably statutory under §101. Applicant respectfully requests that the claims be assessed for novelty and non-obviousness under §102 and §103, respectfully, and that the rejection under §101 withdrawn.

IV. Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1, 2, 5, 6, 9 and 10 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,748,523 (Singh) in view of Applicant’s background. Applicant respectfully traverses the rejection.

The rejection based on Singh is improper because, under the American Inventors Protection Act of 1999, the Singh reference is disqualified as prior art and therefore cannot be used to reject claims under 35 U.S.C. §103(a). Particularly, the following is a quotation of 35 U.S.C. §103(c):

- (c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of §102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

MPEP §706.02(k) notes that “Effective November 29, 1999, subject matter which was prior art under former U.S.C. §103 via 35 U.S.C. §102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention ‘were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.’” This change to 35 U.S.C. §103(c) applies to all utility, design and plant patent applications filed on or after November 29, 1999, including continuing applications filed under 37 C.F.R. 1.53(b), continued prosecution applications filed under 37 CFR §1.53(d) and reissues.”

The present application was filed in the U.S. on February 25, 2004 and therefore meets the filing criteria of "on or after November 29, 1999." Furthermore, the present application and the Singh application were both, and are presently, owned by Analog Devices, Inc. and were therefore "commonly-owned" at the time the invention was made.

Singh is not prior art under 35 U.S.C. §102(a). Section 102 states that a person shall be entitled to a patent unless "(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent." The Singh application was filed in the U.S. on November 2, 2000 and issued on June 8, 2004. No publication of Singh occurred prior to the issuance of the patent. Thus, Singh was first "patented or described in a printed publication" on the issue date of June 8, 2004. The present application was filed on February 25, 2004, which operates as the default invention date. Since the default date of invention (February 25, 2004) precedes the first publication of Singh (June 8, 2004), Singh is not prior art to the present application under 35 U.S.C. §102(a).

Singh is also not prior art under 35 U.S.C. §102(b). 35 U.S.C. §102 also states that a person shall be entitled to a patent unless "(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." The "date of the application for patent in the United States," under §102(b) is the effective filing date of the present application. As discussed above, Singh was first published on the issue date of June 8, 2004, which is after the effective filing date of the present application (February 25, 2004). Accordingly, Singh is not prior art to the present application under 35 U.S.C. §102(b).

The conditions for patentability and loss of right under 35 U.S.C. §§102(c), 102(d), 102(f), and 102(g) ((f) and (g) need not be shown), are not here relevant to the present application, and Singh qualifies as prior art only under 35 U.S.C. §102(e). The foregoing establishes that Singh is disqualified as prior art and any combination relying on Singh is improper. Thus, claims 1, 2, 5, 6, 9 and 10 are rejected on the basis of a combination that applies a reference that does not qualify as prior art and, therefore, Applicant respectfully requests that the rejection of claims 1, 2, 5, 6, 9 and 10 be withdrawn.

CONCLUSION

In view of the above remarks, Applicant believes the pending application is in condition for allowance, and a Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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